**Data Scientist**

**About CarTrawler**

CarTrawler’s proprietary technology and global network of suppliers enables it to offer its partners’ customers a wide choice of competitive car hire and ground transportation alternatives before, during and after they book a flight, hotel or travel package, providing a valuable source of ancillary income to their travel partners, and preventing leakage. It provides an end-to-end white label solution for its partners, including revenue management and customer service.

From a supplier’s perspective, CarTrawler’s exclusive partnerships with many of the world’s largest B2C travel portals means it is the only channel through which it can access this attractive customer segment.

From a consumer perspective, CarTrawler’s extensive car and ground transportation suite of services provide huge choice and value for customers flying in and out of 50,000 locations around the world, creating a truly seamless and easy end-to-end travel journey.

**Role Purpose:**

We research and build deployable data science models to improve outcomes for the business, our suppliers, partners and customers. In 2020 we are expanding our deployment pipeline so that your choice of model will no longer be constrained by “productizability”. So, if a logistic or CHAID makes sense, by all means use it – but if you can justify a TensorFlow approach with a better confusion matrix, we’re open to it. Think of us as a Kaggle that will get deployed into production.

**Reporting to:** Data Science Manager

**We are looking for:**

* Data Scientists with Intermediate/Advanced Machine learning skills (Python preferred, R acceptable, others considered) to deliver these models
* Someone who has a strong theoretical foundation and a desire to use advanced feature engineering and deployable machine learning (e.g. XGBoost) to make a visible difference to the business. The fun part is showing your models can improve KPI’s/objective function significantly vs. the control
* Someone with strong SQL would be beneficial – we have a Snowflake warehouse where all the data you’ll need for models is ETL’d daily. We also have an extensive AWS estate and two model deployment pipelines (one in dev, one stable) that connect directly to customer-facing systems and to Tableau servers for dashboarding/reporting.

**Main accountabilities and key tasks:**

The essential functions of this position include but are not limited to:

* Developing industry-leading data science solutions through working with:
  + Our Data Science Manager, Head of Insights & Data and stakeholders to understand the business problem to be solved
  + Data Intelligence colleagues to source the data required for model(s)
  + Data Science colleagues to select/develop optimal algorithms/techniques
* Devising statistically robust testing plans to validate/demonstrate model efficacy
* Interpreting real-time feedback from deployed tests and adapt where necessary
* Collaborating with colleagues in Trading, Finance, Supply, Partner and Customer functions to solve real problems with deployable solutions
* Effectively communicating outputs to other team members and the wider business in a concise manner that can be understood by both technical and non-technical audiences
* Keep up to date with the latest techniques
  + We are particularly supportive of ongoing learning and development
  + We have a targeted training budget for Data Science for 2020 and a flexible approach to self-paced online learning and appropriate training (Head of Insights & Data approval required)
* Become active in the global data science community – meetups, university collaborations, data science open source, etc.

**The successful candidate will work on:**

* Models that improve how CarTrawler serves customers, partners and suppliers
  + We build conversion, yield, propensity and pricing models
  + We also build fraud-prevention models and in 2020 we will be building customer care and customer satisfaction models to feed Lifetime Value calculations
  + We’ll also be ramping up our tagging and web analytics data
* We are “outcomes focused” – our models must enhance trading performance, maximise return on investment, optimize marketing and/or enhance user experience. We measure using our inhouse MVT platform.

**Critical Interfaces:**

* Work with Trading, Partner Relationship Management, Supply & insurance and CCE (Customer) to ensure they are equipped with tools, models and resources
* Collaborate with Product & Technology to prioritise elements of product development cycles that will help CarTrawler utilise your work reliably and with less dev time
* Work closely with Data Intelligence to support the collection of new data and refinement of existing data sources
* Work with other functions to provide data science solutions to foster new ways of thinking and improve business outcomes

**Knowledge and Experience:**

* M.S. or Ph.D. in a relevant quantitative field, or 3+ years’ experience in a relevant role
* Demonstrated skills in modelling, algorithms, stats and machine learning workflows
* Ability to communicate with colleagues in a clear, precise, and actionable manner
* Familiarity with relational (SQL) databases
* Ability to create compelling visualisations and dashboards (we use Superset and Tableau primarily – for legacy reasons - but of course open to others
* Proficiency with Git and modern development workflows (pull requests etc…)
* Working knowledge (and respect for) factors which need to be considered when deploying to production environments (computational complexity, resource requirements etc...)
* Experience using more advanced ML libraries (TensorFlow, PyTorch, MXnet, etc..) a plus

**We are looking for someone who can demonstrate the following competencies:**

* A passion for empirical research and for answering hard questions with data
* A pragmatic analytic approach that allows for results at varying levels of precision
* Curious nature and natural desire to go beneath the surface of a problem - enjoy diving deep
* Ability to create examples, visualisations, dashboards and/or prototypes to help get the work used by stakeholders.